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ABSTRACT OF THE DISCLOSURE

A method of manufacturing thin film transistors on a substrate having an insulative surface comprises the steps of: (a) forming a plurality of island-shaped semiconductor layers on a substrate having an insulative surface; (b) implanting dopant into first regions at outsides of a region designated for a channel region in each of the semiconductor layers directly or through a thin insulation film whose thickness is equal to or less than 50 nm by ion implantation to form lightly doped regions; and (c) implanting dopant into regions at outsides of the first regions in each of the semiconductor layers directly or through the thin insulation film to form heavily doped source/drain regions whose impurity concentration is higher than that of the lightly doped regions.